

GP-303749

TUNABLE, HEALABLE VEHICLE IMPACT DEVICES

ABSTRACT OF THE DISCLOSURE

An impact absorbing device for a vehicle uses a shape memory material that can be heated to repair deformation from a relatively low speed, low energy impact and its stroking force and energy absorption can be tuned by heating. The shape memory material is suitably used in a crash box having an inserted impact absorbing ram, the box being placed, for example, between a bumper and strong body member. The shape memory material is attached to the box and ram for absorbing energy as the ram is driven into the box. Heating means is provided to repair or tune the shape memory material.